CWC Emissions Strategy Roadmap for Market Leadership

Phase 2 – Strategy Definition

June 30, 2022

RADICLE

Canadian Wood Council

Conseil canadien du bois

Content

Background 1/2

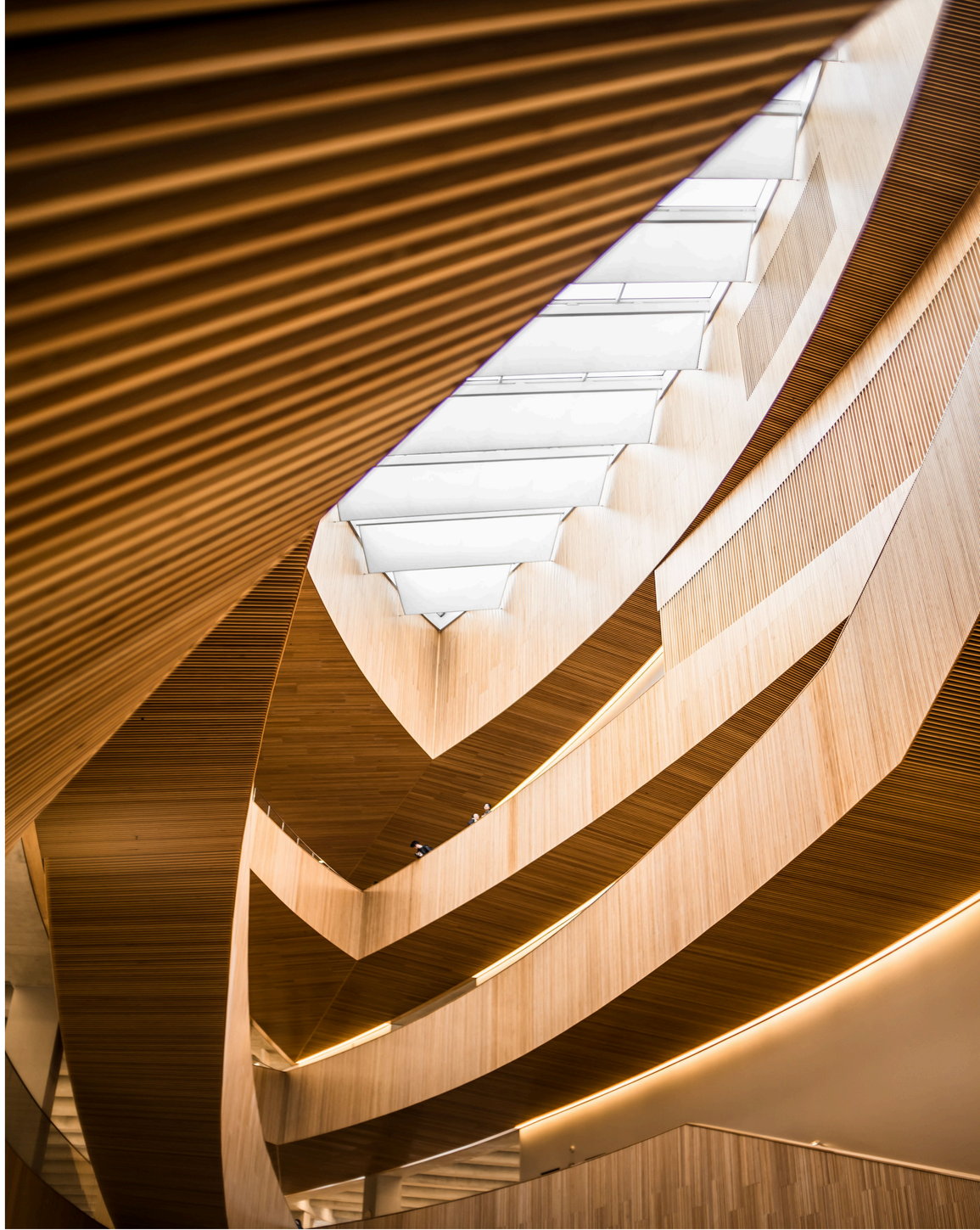
The overall purpose of the Emissions Strategy Roadmap for Market Leadership project was to gain additional insight to augment the work completed in Phase 1 and provide guidance to CWC members and sector partners on the developing space of environmental sustainability and environmental asset generation. Radicle's objective was to provide clear information regarding access to new environmental markets and provide informed recommendations to support CWC in their intent to gain competitive advantage in existing wood product markets.

Throughout this iterative process Radicle supported CWC by engaging with key stakeholders (construction & industry) about the benefit of using wood to mitigate climate change, to develop a plan for a multiyear program rollout and ensure a pathway that aligns with CWC strategic goals.

This project has been divided up into three distinct phases: Phase 1 – Discovery, Phase 2 – Strategy, and Phase 3 – Implementation.

Phase 1 - Discovery

The goal was to understand the perceptions and interests of members and partners of the Canadian Wood Council (CWC) and the Forest Products Association of Canada (FPAC) with respect to carbon strategies for their organizations and the wood and forestry sectors. This phase included 12 interviews with CWC members and key industry stakeholders, as well as an online survey which included 45 respondents from CWC members and non-members of the industry.



Background 2/2

Phase 2 - Strategy Definition

The approach originally presented was modified to include direct, interactive input from key senior stakeholders through a facilitated workshop which helped inform and complete missing key opinions and perspectives in order to finalize the outcomes.

Conducting a workshop to clarify expectations and vision for CWC sustainability positioning, as well as to gather input on the net-zero roadmap preliminary approach was the approved option that CWC felt would have the best conclusion.

Radicle’s goal for the workshop was to present our findings to date on the perceptions around CWC's current positioning in sustainability and carbon management, and to guide the group through a workshop by asking a series of targeted questions to establish a defined vision and mission for CWC's future role in this evolving space.

Radicle coordinated an additional workshop session to gather input from the technical leadership team about the potential solutions and alignment in approach for a net-zero roadmap.

Phase 3 – Implementation – This phase will be defined depending on the outcomes of Phase 2.

Objective & Outcomes - Phase 2

Draft an Emissions Strategy Roadmap for Market Leadership

- Define Carbon Offsetting Opportunities
- Identify barriers for the wood sector in accessing environmental markets
- Develop offset program description and benefits for membership
- Review of regional requirements for access
- Determine the business case for prioritizing offsetting opportunities and develop a timeline for rollout, if applicable

Net-Zero Strategy Roadmap

- Outline steps and deliverables for the sector throughout supply chain including data framework (for GHG accounting) and realistic goals
- Develop a Net-Zero Strategy Roadmap
- Outline risks and challenges in this approach and highlight sector opportunities
- Timeline for development and outline of stages
- Data requirements
- Gap analysis between current CWC/FPAC education and awareness initiatives and best practice for net-zero communications strategy. This will include key recommendations on bridging the gap including strategies, tactics, audience, and suggested KPIs

Context Assessment

Sustainability at the core

GAP

Prioritizing sustainability at the core of the growth of the wood sector into new markets that are demanding sustainable, responsible and low-carbon products and practices.

CHALLENGE

- The biggest **challenge** for CWC will be to lead the **shift of mentality about sustainability in the industry from 'production of wood' to 'regeneration of resources'.**
- To continue developing its leadership, the wood sector will need to accelerate the transition:
  - **From producing 2x4 frame sticks to fulfilling the expectations on the production of mass timber**
  - From **producing wood from clean-cuts to develop the culture of forest farming**
  - And from the **disposal of wood to the landfill after use to avoid it and become circular**

OPPORTUNITY

Lead the integration, alignment and promotion of **sustainability as the core competitive advantage of the wood sector towards** net-zero goals compared to other building materials and to other wood global suppliers:

- **Integration -** into the core of the mandate and practices of CWC and the development of any future initiative
- **Alignment -** among the industry players, with the understanding of its importance to ensure market growth in the future
- **Promotion -** of the importance of sustainable practices as part of the core nature of the industry to create differentiation vs other materials and as the competitive advantage vs. other materials

Additional gaps, challenges and opportunities

GAPS

- Different levels of understanding, commitment and interest of the different stakeholders about the sustainability of the sector and the roadmap to net-zero
- The sustainability initiative appears to be separate and not integrated directly to the vision and mandate of CWC
- Engagement in the solution is an individual decision, not a part of the industry movement towards more sustainable practices
- Timelines and pleads from the Government to become net-zero by 2030 are not aligned with the sense of urgency and commitment of the industry players
- Lack of connection and communication between upstream, midstream and downstream stakeholders (sawmill - designer)
- Apparent lack of diversity in the skillset of the team at CWC with the need to bring more 'soft-skills' members that can engage and communicate (not just engineers that are focused on the codes and standards)

CHALLENGES

- CWC's mission and its role in sustainability needs to be amplified. CWC is seen as the entity that deals with the standards and codes, focused on the engineering and 'scientific' aspects of the sector. It's role in the sustainability roadmap needs to be amplified to lead the journey in other aspects beyond its current mandate.
- CWC role as a supporting entity to facilitate the generation of skills to increase capacity of mass timber in a sustainable way and to generate the right conditions to support the shift from clear-cut to forest farming. The sector will continue to move towards the generation of mass timber, but the capacity to fulfill the demand might not be there, it will be a role that CWC will need to develop in order to continue supporting the future of the sector.
- Mass timber as the one solution for the sector, but apparent lack of understanding if the capacity will allow the producers to fulfill the demand.

OPPORTUNITIES

- **Development of carbon offsetting guidelines and best practices for the forest and wood sectors. Based on consistently positive comments of the benefits that credits could bring to the industry overall, even when their nature is only transitional to the net-zero goal.**
- **Development of embodied carbon practices through the** integration into LEED building calculations and through the use of tools in construction. Conversations are arising with great interest on understanding how embodied carbon can be a more sustainable way to build greener buildings.
- Development of the framework to **promote farming forests** instead of clear-cut practices, providing the right conditions to make the shift in the industry. Accelerate the transition to enter into production levels that can compare with European standards and to shift current culture and social perceptions about clean-cut practices.
- Development of an **integrated vision of the roadmap to net-zero** based on a multi-stakeholder approach that could input in the presented one. An important component to gain engagement, credibility and generate change is to involve the parties that will be executing and implementing the roadmap, those voices need to be included and lead by CWC to develop a substantiated and integral plan.
- Articulation of the **sustainability story in an approachable and meaningful way** so the different stakeholders related to CWC can understand it and follow it. The importance of sustainability for CWC and the sector needs to be an integral part of the narrative, at the core of the vision, mission and values of CWC. Sustainability will be the glue to bring the different stakeholders together towards the same cause.

CWC Sustainability Strategy

The global growth of sustainable wood

- The annual demand for wood is expected to triple by 2050 to more than 10 billion m3, to meet the demand responsibly forests and production of wood need to be managed in a sustainable way.
- The sustainable use of natural resources, including forests, is a key tenet of the 2030 Agenda for Sustainable Development. The 2015 Paris Agreement also highlights the contribution of forests to climate change mitigation and adaptation.
- Roughly 11% of GHG emissions come from building materials and construction; another 28 percent comes from building operations, which mostly involve energy. As energy gets cleaner in coming years, materials and construction will represent a growing fraction of buildings' carbon impact; mass timber could reduce this percentage.
- Cross-laminated Timber buildings represent a 26.5% reduction in global warming potential according to a recent research conducted by the University of Washington.

Source: FAO.org, Sustainableforestproducts.org

https://www.vox.com/energy-and-environment/2020/1/15/21058051/climate-change-building-materials-mass-timber-cross-laminated-clt

Why is sustainability important for CWC?

- Position wood as a **safe and clean resource** in the new marketplace
- Participate in the solutions to avoid the climate debacle
- Make sustainability the common element to unify members towards a topic that can differentiate them and bring them economic growth
- Sustainability is a topic that can attract new members and new generations of participants in the wood industry who have a progressive mindset
- Integrating sustainable practices can increase the government and NGOs funding of programs and research

Shifting perceptions

FROM	TO
• Harvesting wood is bad for the environment	• Farmed wood is a regenerative resource
• Building with other materials like concrete or steel is sustainable	• Building with wood is more sustainable than building with other materials
• Sustainability is an after-thought once the economic reward is achieved	• Sustainability is intrinsic to economic growth
• Wood generates waste at the end of the process that needs to be burnt or disposed generating waste	• Wood can be an infinite and circular resource avoiding the landfill

CWC's definition of 'Sustainability' for the wood sector

Sustainability means for CWC supporting the efforts of its members to reduce their emissions of CO2 to the minimum along their value chain, from cradle to cradle, and avoiding the landfill.

This includes four different areas of impact:

- **Regenerate** – replanting, reforestation
- **Reuse** – forest farming, avoiding clean cut, collecting and reusing framing or others
- **Recycle** - conversion of wood products
- **Repurpose** – find new uses of wood materials

CWC's Sustainability Strategies

CWC has a number of options to become a leader in sustainability in the wood sector. This project considered the following approaches:

1. **Carbon Market-** Could CWC membership businesses generate carbon credits through business practice changes that would lead to a reduction in emissions?

2. **Net Zero Strategy Roadmap**—What approaches does CWC have in terms of becoming net-zero?
    a) Organizational approach would allow CWC membership business operations to measure, reduce, and report on their emissions and emission reductions with the intention of reaching zero emissions by 2050 through reductions in scope 1,2,3 emissions. **This approach would allow CWC membership business to make claims that their businesses are net zero in their operations.**
    b) Product approach would allow CWC membership businesses to measure, reduce, and report on their emissions and emission reductions for specific wood products through life cycle assessment or environmental product declarations. **These instruments would allow the products from CWC membership businesses to be the key drivers in the achievement of Canadian Net Zero targets in the construction sector by reducing the embodied carbon in whole buildings on a life cycle basis.**

CWC's Sustainability Positioning

Sustainability vision

Make Canadian wood an integral part of sustainable living for generations to come.

Sustainability mission

Accelerate the integration of sustainable practices in the wood sector among CWC's members towards net-zero operations by 2030.

Support our members to avoid, reduce and mitigate emissions.

Sustainability purpose

Grow our member’s success in the sustainable wood marketplace while supporting them to minimize their carbon emissions.

‘Growing Success & Lowering Emissions’

Roadmap to net-zero 2030

Goal and Strategies for success by 2030

Fulfill CWC's mandate to expand market access and demand of Canadian wood

I. Position '**sustainability**' front and center as the core driver of the industry to the future

II. **Visualize the goal to Net-Zero 2030** and make it tangible and attainable to key audiences

III. **Facilitate the integration** of sustainability codes, standards and certifications among members

Net Zero Roadmap Components

I. Organizational Impact

1. Measure Operational Emissions
2. Reduce Operational Emissions
3. Report on Operational Emissions and Reductions
4. Obtain Net Zero Certification

II. Product Impact

1. Net-zero products approaches
   a. LCA
   b. EDC
2. Assist CWC businesses in reducing the embodied carbon in buildings for the construction sector on a whole building basis.

III. Communication and Education Impact

1. Education & Training
2. Communication & Advocacy

I. Organizational Impact

Strategy for Net Zero Roadmap

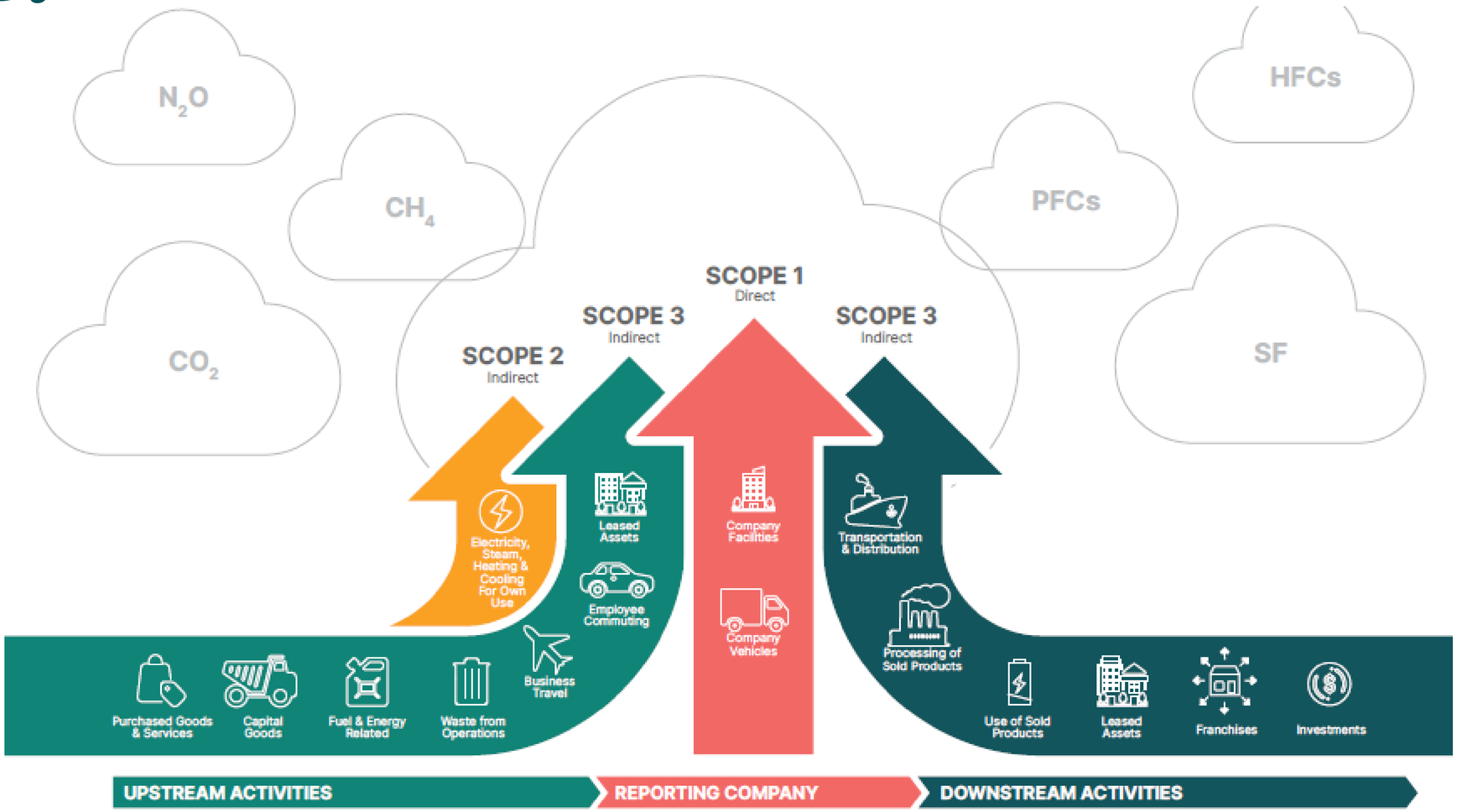
A Net Zero Strategy Roadmap is intended to describe the approaches that CWC could take in reaching net zero emissions. The first approach is at an organizational level and is designed for the businesses underneath the CWC membership to measure, reduce, and report on emissions to become net zero.

To achieve net zero as a business, all the emissions from scope 1,2, and material scope 3 need to be reduced to zero. This means that direct and indirect emissions from business operations need to be reduced as follow:

- **Scope 1**: direct emissions from the company facility and its vehicles
- **Scope 2**: indirect emissions from electricity/heating/cooling for the company facility
- **Scope 3**: indirect emissions that are both upstream and downstream from the company

**A demonstration of the different scopes are provided in the next slide.*

Emissions Accounted for in Net Zero Strategy



Net Zero Accounting Standards & Targets

In order to **measure and account** for emissions, agreed upon standards must be followed. One of the primary standards for operational emissions for measuring, reducing, and reporting on emissions is the Greenhouse Gas Protocol.

Note: Radicle's Climate Smart program is consistent with the GHG Protocol and therefore meets some of the largest reporting standards globally.

Part of the process of measuring, reducing and reporting on emissions is to also **set targets overtime** for those emissions in order to ensure the business is on track to meet its net zero goals. The Science Based Target initiative (or SBTi), provides a standard that can assist companies in setting net zero targets.

Setting Emission Reduction Targets

SBTi developed the first global standard that helps companies set net-zero targets. The Net-Zero Standard was created to help provide a globally recognized and agreed upon approach to reach net-zero emissions. Specifically, the Net-Zero Standard helps companies to create a plan to become net-zero by 2050 by utilizing near- and long-term targets for emission reductions.

The Net-Zero Standard is generally intended to support businesses with more than 500 employees, however small-and-medium enterprises (SMEs) can also use the standard. SBTi offers a relatively simplified version for SMEs to reach net-zero by focusing on a smaller subset of the key elements for target setting. For example, the SME approach allows companies to immediately set targets for scope 1 and 2 emissions however they are not required to set targets for scope 3. They are, however, encouraged to align themselves with the SBTi criteria and best practices when they consider their scope 3 emissions.

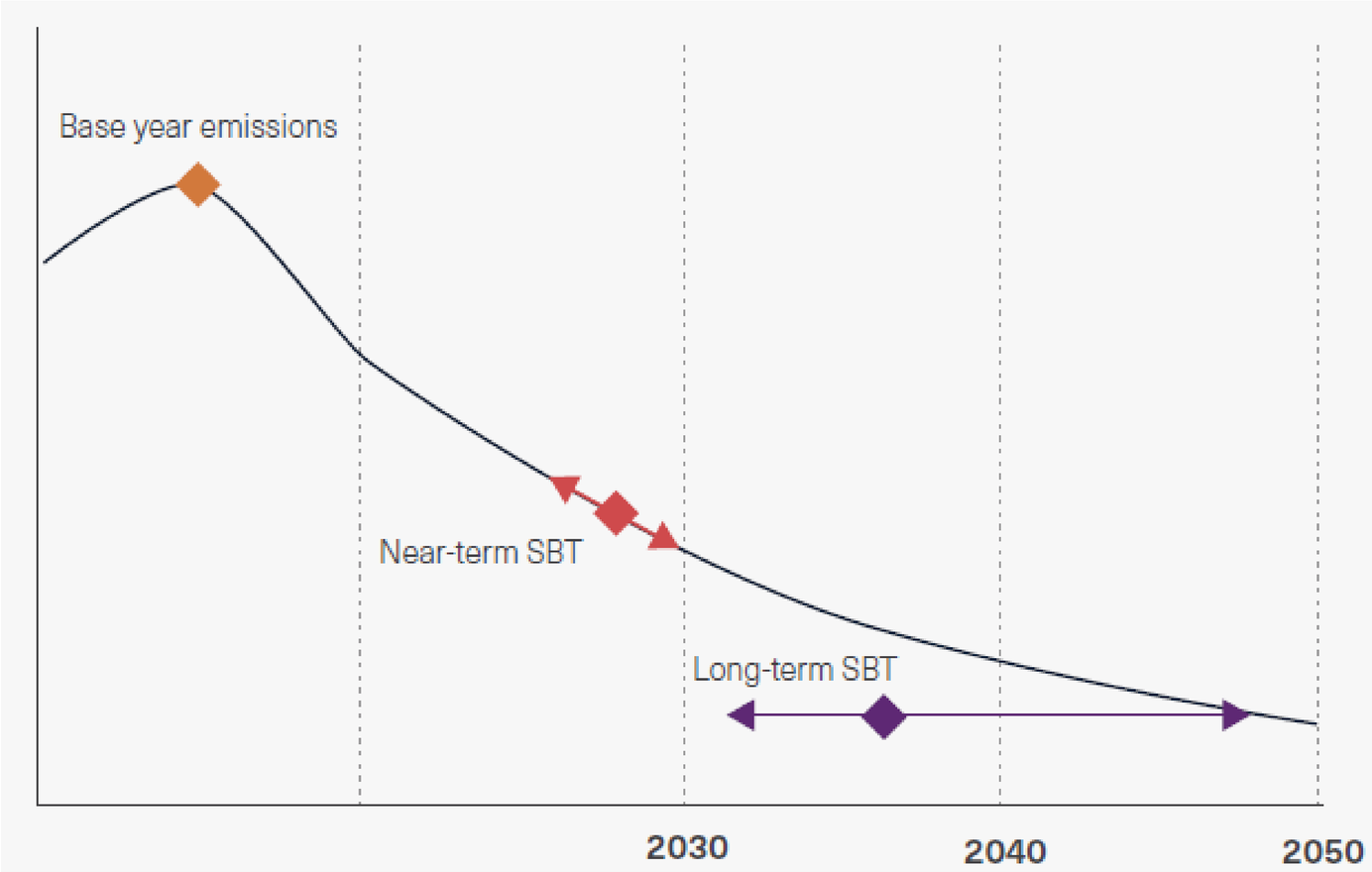
Overall, the Net Zero Standard provides guidance on how corporations can account for their scope 1,2,3 emission reductions, and in addition to that they should also “neutralize” any of their residual emissions that remain at the end of the net zero target year. There are 4 key steps that need to be taken to implement the full Net Zero Standard, and those steps include: first, set a near-term emission reduction target; second, set a long-term target; third, mitigate emissions that go beyond the company’s value chain; and fourth, neutralize any residual emissions.

See the graph on the next slide for the expected timeline and target years and milestones under the Net Zero Strategy.

Setting Emission Reduction Targets

The base year is the year a company begins measuring.

Targets are then set for near-term and long-term.



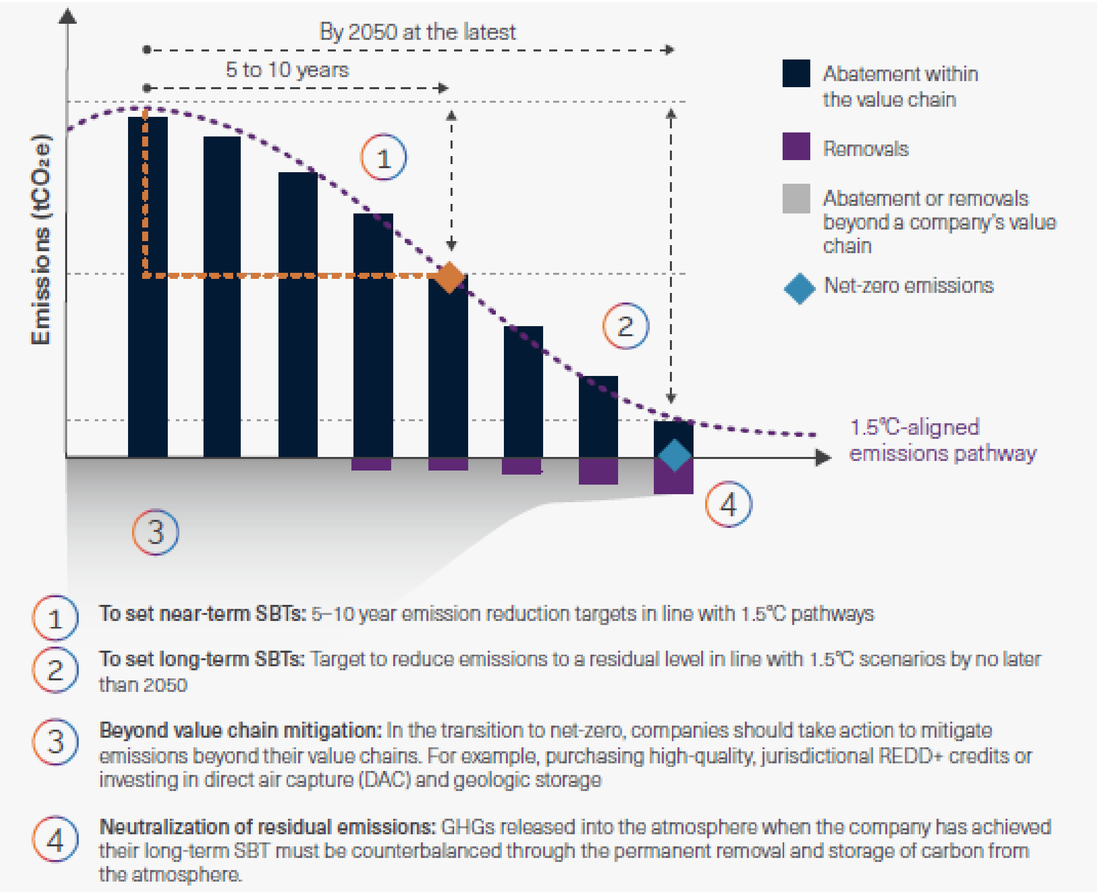
The graph above shows the Net Zero Standard timeline of targets

Source: Science Based Targets, SBTi Corporate Net-Zero Standard. Version 1.0. October 2021.p. 14
https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf

Setting Emission Reduction Targets

- **The near-term target** is defined as the next 5-10 years of GHG emission reductions, and the longer-term targets are for the 2050 (or sooner).
- Once a company has reached their near-term target, they must then calculate another 2nd near-term target which serves as a milestone to reaching their **long-term targets**. The near-term targets are used to instigate significant reductions which are to be achieved by 2030. The near-term emission reductions are imperative to not exceeding and meeting the long-term targets.
- Success in reaching the long-term targets is defined as reducing emissions to **net zero by 2050** through the reductions of emissions (scope 1,2,3) as well as those that are beyond their value chain, and then neutralizing emissions.
- **Neutralizing emissions** are needed because most companies are expected to have reduced at least 90% of their emissions when reaching their long-term target, but there will still be some emissions that remain. These residual emissions can be reduced through removal and storage of carbon from the atmosphere.

These steps described above are demonstrated in the next slide.



The graph shows the Key Elements of the Net Zero Standard

Source: Science Based Targets, SBTi Corporate Net-Zero Standard. Version 1.0. October 2021.p. 14
https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf

Setting Emission Reduction Targets

There are a variety of approaches to developing long and near-term targets, however, SBTi recommends a 5-step approach to setting targets. The company should select a base year which is the year they first track emissions in a consistent manner.

I. The company should **select a base year** which is the year they first track emissions in a consistent manner.
II. The company should then **calculate its emissions**. This requires a full GHG emissions inventory. This should cover at least 95% of the company's scope 1 and 2 emissions and a scope 3 screening. Note: that there are certain GHG emissions that require a separate GHG inventory; some of those include emissions from biomass combustion, processing, and distribution, and from land-use emissions and removals from bioenergy feedstocks.
III. The company should **set target** boundaries which means near-term targets should cover 95% of scope 1 and 2 emissions. With scope 3 emissions the company should cover at least 67% of emissions. With long-term targets, the company-wide scope 1 and 2 emissions need to be covered and 90% of scope 3 emissions. (See next slide)
IV. The company should **choose a target year**. Near-term targets are 5-10 year and long-term must be by 2050 or sooner.
V. The company should **calculate targets**

See the next slide for a high-level demonstration of the SBTi recommended steps.

Source: Science Based Targets, SBTi Corporate Net-Zero Standard. Version 1.0. October 2021.p. 20
https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf

Emission Reductions for the Wood Sector

- In order for companies to set targets, SBTi Net Zero Standard offers sector-specific pathways to achieve these goals.
- There are a number of specific pathways that are either available now or under development. Those pathways include energy supply, industry sectors such as cement and steel, transport sector, building sector, and sectors within forest, land, and agriculture (FLAG).
- In addition to the sector-specific pathways, SBTi Net Zero Strategy also offers a cross-sector pathway, however, for those sectors that have a specified pathway, the single sector approach should be used over a cross-sector pathway.
- The SBT sectors for agriculture, forestry, and other land use (AFOLU) have a FLAG pathway as well as a FLAG commodity pathway.

In January of 2022, the SBTi released a draft FLAG guidance document. The guidance document is now under public consultation and a final document will provided later in 2022. The information provided here is based on the draft version.

Emission Reductions for the Wood Sector

- The land sector which includes agriculture, forests, and other land uses accounts for about 25% of GHG emissions worldwide.
- Reducing emissions in the land sector will be through land use changes in agriculture, forestry and other land uses in agriculture as well as through demand shifts in the sector.
- In addition to the emission reductions, the land sector also has the opportunity to remove GHG emissions through enhancing carbon sinks such as in soils and in forests.
- Emission removals can occur through improving forest management practices, restoring natural ecosystems, and soil carbon sequestration.
- The **FLAG tools and guidance** can help companies in the FLAG sector to reduce their emissions.

Although the FLAG guidance can target a range of end-users this report focuses on the parts that are most relevant for pulp and paper product producers and wood product producers and retailers. (see next slide)

Emission Reductions for the Wood Sector

- The FLAG tool and guidance is not currently required, however, in September 2022 onwards, companies that are carrying out their net zero strategy are required to use the FLAG guidance. **See table for a description of some of the criteria for FLAG target setting.*
- Note that FLAG designated sector includes Forest and Paper Products that have more than 20% of revenues coming from forest, land or agriculture, *or* companies that FLAG-emissions total more than 20% of the overall emissions for scope 1, 2, & 3.
- Similar to what is noted in Figure 3 above, the FLAG-related targets much cover at least 67% of scope 3 FLAG-related emissions as well as 95% of all FLAG-related scope 1 and 2 emissions.
- For the forestry sector, the emissions and removals that must be accounted for include carbon sequestration, improved forest management, afforestation and reforestation, agroforestry, biochar and soil organic carbon.
- If a company's emissions are related to timber and wood fiber and account for more than 10% of their FLAG emissions, then they are required to take a commodity pathway for timber and wood within the commodity tool.

Topic	Criteria/ Recommendation	Description
Companies required to set FLAG targets	FLAG-C1 Sections 2.1	The SBTi requires companies that meet either of the following two criteria to set a FLAG-target: *i)* Companies with land intensive activities in their value chain from the following FLAG-designated sectors are required to set FLAG targets: • Forest and Paper Products – Forestry, Timber, Pulp and Paper, Rubber • Food Production – Agricultural Production • Food Production – Animal Source • Food and Beverage Processing • Food and Staples Retailing • Tobacco *ii)* Companies in any other SBTi-designated sector that have A) more than 20% of revenues coming from forests, land or agriculture; OR B) companies with FLAG-related emissions that total more than 20% of overall emissions across scopes 1, 2 and 3.
Target boundaries and emissions coverage	FLAG-C3 Section 2.1.2	The FLAG target must cover at least 95% of FLAG-related scope 1 and 2 emissions. The FLAG target must cover at least 67% of FLAG-related scope 3 emissions. FLAG-related scope 3 emissions that are included in the FLAG target are separate from a company's non-FLAG 67% scope 3 target coverage.
Tool usage	FLAG-C9 Section 3.3.1	Companies with emissions associated with one of the nine available agricultural commodity pathways that account for 10% or more of a company's total FLAG emission (across all scopes) may use the commodity pathway for that commodity. Companies with emissions related to *timber & wood fiber* accounting for 10% or more of their FLAG emissions are *required* to use the commodity pathway for timber & wood fiber available in the commodity tool.

Source: Forest, Land, and Agriculture Science Based Target Setting Guidance, Draft for Public Consultation, January 2022. p. 5-8.

Emission Reductions for the Wood Sector

FLAG Sector Approaches

SECTOR		Emissions coverage		User description	FLAG approach
		Scope 1	Scope 3*		
Food & Ag	• Food Production – Agricultural Production • Food Production – Animal Source	95%	67%	Land owner/ farming company with feedstock/livestock production corresponding to one or more FLAG specific agricultural pathways (existing FLAG commodity pathway).	**Sector** approach *or* **Commodity** approach
				Land owner/ farming company with feedstock/livestock production other than the 10 FLAG specific pathways.	**Sector** approach
	• Food and Beverage Processing • Food and Staples Retailing • Tobacco	–	67%	Companies with diversified land use intensity activities in their value chain.	
				Company with FLAG specific commodity production (commodity tool existing pathway) in their value chain.	**Sector** approach *or* **Commodity** approach
Forest	• Forest and Paper Products – Forestry, Timber, Pulp and Paper, Rubber	95%	67%	Company in the forest product industry; or landowner or land manager in the forestry product industry.	**Commodity** approach
Other**	• Consumer, Durables, Household and Personal Products • Containers and Packaging • Hotels, Restaurants, and Leisure, and Tourism Services • Textile Manufacturing, Spinning, Weaving & Apparel • Textile, Apparel, Footwear and Luxury Goods • Retailing • Tire • Any other with significant land emissions	95%	67%	Companies with emissions related to **timber & wood fiber** accounting for 10% or more of their FLAG emissions	**Commodity** approach
				Company with FLAG specific commodity production (commodity tool existing pathway) in their value chain.	**Sector** approach *or* **Commodity** approach
				Company with diversified land use intensity activities in their value chain.	**Sector** approach

*Scope 3 emissions coverage does not apply to agricultural companies with land partners. Companies using other land (externally owned) to their own production must include their land related emissions at 95%.

**If A) > 20% revenues coming from forests, land or agriculture; OR if B) > 20%of overall GHG emissions associated with land intensity activities.

Source: Forest, Land, and Agriculture Science E

Emission Reductions for the Wood Sector

SBT FLAG and the GHG Protocol Land Sector and Removals Guidance

- The FLAG Guidance is expected to be aligned with the upcoming **GHG Protocol Land Sector** and Removals Guidance which will be released at the end of 2022.
- The GHG Land Sector and Removals will take a value chain approach and also provide corporate level accounting and reporting guidance.
- Once this protocol is complete, then FLAG guidance will be updated as need in order to ensure it is aligned.
- The SBTi recommends that companies that plan to use FLAG targets proceed with target setting using the currently available information on guidance.

Source: Forest, Land, and Agriculture Science Based Target Setting Guidance, Draft for Public Consultation, January 2022. p.12.

Emission Reductions for Wood Commodities

Commodity and Sector Approach

- A sector pathway approach considers emissions on an absolute basis or tCO_2e/t whereas the commodity approach is on an intensity basis which is a tCO_2e/t of commodity weight. **See table for a description of the commodity-specific emissions that must be tracked.*
- Note that companies may use a commodity and sector approach as a single company may have more than one commodity that can be used by the commodity tool and as well as emissions that can be used for the sector approach.
- Companies with one or more of the commodities, listed in the table, and that a specific commodity accounts for 10% or more of the total FLAG emissions can use the commodity pathway, however, for timber and wood fiber the company is *required* to use the commodity pathway.

Note that the commodity approach for timber and wood fiber is in the units of m3 solid under bark.

FLAG Sector and Commodity Approach

Approach	Users
FLAG Sector Approach	Companies with diversified land-intensive activities in their supply chain, and/or with limited access to data from suppliers; companies with land-based emissions that are not covered by the commodity approach.
Calculate targets for diversified FLAG emissions	Companies with emissions associated with a commodity included in the commodity approach, but where emissions from the commodity in question are less than 10% of the company's overall FLAG emissions.
FLAG Commodity Approach *Calculate targets for FLAG commodity-specific emissions* • *Beef* • *Chicken* • *Dairy* • *Maize* • *Palm oil* • *Pork* • *Rice* • *Soy* • *Wheat* • *Timber & wood fiber*	Companies with emissions associated with one of the nine available agricultural commodity pathways that account for 10% or more of a company's total FLAG emission may use the commodity pathway for that commodity. Companies with emissions related to **timber & wood fiber** accounting for 10% or more of their FLAG emissions are required to use the commodity pathway for timber & wood fiber available in the commodity tool.

Source: Forest, Land, and Agriculture Science Based Target Setting Guidance, Draft for Public Consultation, January 2022. p.20.

Data for Emission Reductions for Wood Commodities

Data for FLAG Targets:

- Companies are expected to collect high-quality primary data that are representative of actual FLAG-related emissions as well from their supply chain for scope 3.
- The FLAG data guideline will follow data quality guidance provided by the GHG Protocol Land Sector and Removals Guidance, as well as the GHG Protocol Value Chain (Scope 3) Standard.
- Companies are also expected to use the most granular data possible to develop their emissions inventory.
- Although default data is acceptable, since it is less accurate (and may limit a company in tracking its emission reductions), then the potential uncertainty of the default data should be disclosed in a transparent manner.

Data Needs for FLAG Targets:

TOOL	FLAG **SECTOR** APPROACH	FLAG **COMMODITY** APPROACH
Target Setting Approach	Absolute Contraction	Intensity based
Scenario	1.5 C[a]	
DATA types	DATA needs	
FLAG Base year	*required*	*required*
FLAG Target year [b]		
FLAG Base year emissions (tCO_2e) [c]		
Commodity production in base year (kg or m^3)	*N.A.*	
Production target year (definition)		
Disaggregated LUC emissions from other FLAG (non-LUC) emissions (tCO_2e)		*optional*

Source: Forest, Land, and Agriculture Science Based Target Setting Guidance, Draft for Public Consultation, January 2022. p.22.

CWC Net-Zero Challenges

- As stated earlier, emission reductions under the FLAG Guidance needs to be measured at a company level. This means that emission reductions are not collected and reported on at a sector level. This poses a challenge for CWC which works at a sector level. Emission reduction measurements would need to be done at the company level—which means that CWC would need to work with its members' members to carry out this work. **There are opportunities for CWC to engage in this work.*

- Consistent and quality data gathering is very important for emissions reporting. **Radicle Climate Smart Program can assist with this.*

- CWC would need buy-in from key emitters in the sector to enable the largest emission reductions.

- There may be an overlap with existing regulatory reporting for emissions and thus those that *are required* to report may feel they are doing double the work to engage with CWC.

- Some fear that emissions reporting will result in new or increased regulation.

CWC Net-Zero Opportunities

- **Timely Engagement for Forest-based Companies.** Prior to 2022, land-based emission reductions were not part of the most recognized international standard in organizational carbon accounting called the GHG Protocol. The GHG Protocol allows a company to measure and account for its emissions and reductions, however, at **the end of 2022 they will release the first land based GHG Protocol called the *Land Sector and Removal Guidance* which will allow land-based companies to account for emissions in those sectors**. While this GHG Guidance has been developed, the SBTi's FLAG Guidance has been developed in tandem with the GHG Protocol and will therefore be aligned to allow for target setting once both Guidance documents are finalized. **These two accounting and target setting organizations are creating a first-time opportunity to allow land-based companies to measure and account for emission reductions and removals.**

- Once all CWC members-members are engaged in target setting and measuring emission reductions, CWC has an opportunity to be able to act as an **aggregator** of all the emission reductions to demonstrate at a sector level how the wood sector is doing overall. The collation of all the members' emission reductions could be used to leverage support for the sector. For example, if CWC finds that the highest emissions are in certain locations for certain business activities, they could lobby for support for those businesses so that the whole industry could be moved to net zero.

- CWC has an opportunity to **set the standard** for sector emissions measurement and reporting for the sector.

- **Consistent data collection** will also enable more transparency on which parts of the sector has the greatest opportunities for reductions.

- By engaging in this voluntary approach and reporting the sector reductions over time, they have the ability to **lobby on behalf of the whole sector.**

- CWC can also get ahead of fragmented regulations and begin emissions measurement, reduction, and reporting for business all across the country (and possibly before an entity gets regulated).

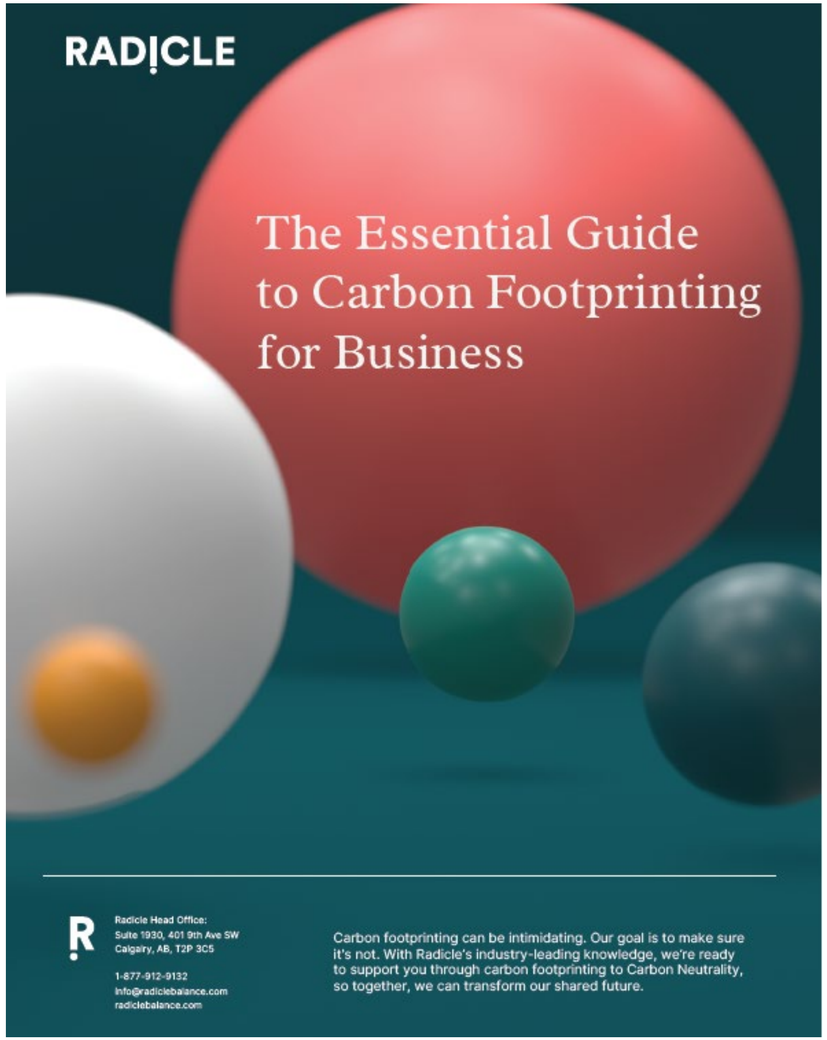
CWC Net-Zero Opportunities

Opportunity with Data

- **Manage Emissions Data in a Consistent Manner & Set Net-Zero Sector Standards.** In order to carry out a sector-wide net zero strategy, the data that is collected must be consistent across the reporting entities. Data is typically collected and managed very differently across firms and throughout the supply chain and thus significant effort typically goes into organizing the creating consistent data in order to estimate emissions and reduction activities. **By collecting consistent data across multiple firms, CWC will be able to make comparison across the firms and speak broadly about the sector overall.**

Radicle's Climate Smart software solution could be used as a one-stop-shop for data collection for all the CWC's members' members. The CWC members could have a dashboard where all the member's data can be seen, and the emissions and reduction could be viewed. In addition, CWC could see which entities are the largest emitters and CWC could figure out how they could support them to make realistic targets so the whole industry moves towards net zero. In addition, through consistent data collection, CWC would be able to essentially organize and set the standard for the sector's net zero strategy engagement.

See the next 3 slides for an overview of the Climate Smart Program and steps involved.



Carbon Neutral

How you get there (credibly)

STEP 1
Calculate the size of your CO_2 foorprint

STEP 2
Reduce CO_2

STEP 3
Offset CO_2

STEP 4
Purchase **quality**, **credible** offsets

How it Works

Training Program

Online Software Tool

One-on-one support

Certification and B2B network

Offset and Carbon Neutral

GHG Protocol

Most recognized international standard

Quantify and Reduce

Energy, waste, and transportation costs and emissions

Practical, Step-wise, and Guided Approach

Session 1:
MEASURE

Set boundary, calculate inventory

Session 2/3
REDUCE

Develop GHG reduction Plan

Session 4:
LEVERAGE

Communicate, commit, offset

Purchase and retire carbon offsets

CWC and Carbon Markets

Radicle examined the opportunity for CWC and its membership to develop carbon credits as one approach to its Sustainability Strategy. Although opportunities may exist for specific businesses within the membership, **Radicle does not recommend carbon markets as a main Sustainability Strategy** as there are not a significant number of relevant protocols in the voluntary and compliance markets that would make it worthwhile as a primary strategy.

Radicle researched and documented the protocols in both the global voluntary and Alberta compliance markets that may be relevant for some businesses. The list is provided below by activity type and protocol (asterisk means it is only in Alberta).

Activity Types		
Manufacturing	**Transportation**	**Forestry Sector**
New Cogeneration Facility	Fuel switching from Gasoline to Ethanol in Flex-fuel Vehicle Fleets	Canadian Forest Carbon Offset
Transportation Energy Efficiency from Lightweight Pallets	Electric Vehicle Charging Systems	Improved Forest Management on Canadian Forestlands
* Energy Efficiency	**Operational Impact of Product/ Performance**	Improved Forest Management
* Energy Generation from the Combustion of Biomass Waste	Weatherization of Single Family/Multi-family Buildings	Improved Forest Management in Temperate and Boreal Forests
* Waste Heat Recovery	**End-of-Life/ Deconstruction**	Improved Forest Management through Reduced Impact Logging
* Fuel Switching	Energy Efficiency and Solid Waste Diversion Activities *(only in a sustainable community)*	Improved Forest Management with Conversion from Logged to Protected Forest
* Methane from Waste *(draft--final release intended for 2021 but not released yet)*		Preventing Planned Degradation
		Afforestation and Reforestation of Degraded Lands
		Improved Forest Management--Canadian Federal Government OBPS (*not public yet)

Note that on the previous slides, carbon offsets can be purchased as part of a net zero strategy to offset any emissions that cannot be reduced to zero through scope 1,2, & 3. Thus CWC membership businesses could interact with carbon markets through purchasing credits.

Carbon Market Business Case Example

Although carbon offset development is not necessarily a focus of the recommended CWC sustainability strategy, Radicle did carry out a business case analysis to show the costs and benefits for the development of carbon credits. **Note this analysis does not include the cost of the activity or technology change, so a full business case analysis would need to include those costs.*

Carbon Market Business Case Example

Although carbon offset development is not necessarily a focus of the recommended CWC sustainability strategy, Radicle did carry out a business case analysis to show the costs and benefits for only the carbon credit development. Note this does not include the cost of the activity or technology change, so a full business case analysis would need to include those costs.

The emission reductions are estimated as the difference between a business-as-usual (baseline) case compared to the project scenario. The emissions from the baseline and project scenarios are estimated for both the levied and non-levied emissions for a **fictitious pulp and paper facility**. The facility baseline and project scenarios examples are provided. Note that the project scenario emissions decreased while the levied emissions increased. The levied emissions will be deducted from the total emission reductions that were achieved through the project, and thus the net result is a decrease in emissions reductions.

Year 1	**Baseline**	**Project**	**Emission Reductions/ yr.**
Non-levied Emissions	298,232	228,129	70,103
Levied Emissions	12,479	14,190	(1,711)
		Total emission reductions:	**68,392/year**

Carbon Market Business Case Example

Revenues

The pulp and paper facility reduced an average of 69,425 tonnes of CO2e per year were over an 8-year crediting period (2018-2025) with a total reduction of 555,400 tonnes of CO2e. The table demonstrates the emission reductions from the energy efficiency project over time (non-levied) and the associated emissions that are deducted from levied emissions (which are ineligible for carbon offsets). The total emission reductions per year are multiplied by a high and a low carbon price to estimate the expected revenue. Note, from this example, the expected revenue could range annually from $1m to $3.8m and is based on the low and high carbon prices. As shown in Table 2, the low and high carbon prices increase over time to reflect the expected changes in compliance price per/tonne in Alberta. **The carbon prices that are provided are conservative.*

Reduce Electricity (by replacing high stage consistency w/ low stage consistency)	Total Annual t GHG Reductions (NON-LEVIED)	Total Annual t GHG Reductions (discount 2%) (due to LEVIES)	Assumed carbon price (low)	Assumed carbon price (high)	Annual Value of Reductions (low)	Annual Value of Reductions (hi)
Y1	68,400	67,032	$ 15	$ 30	$1,005,480	$2,010,960
Y2	69,000	67,620	$ 25	$ 40	$1,690,500	$2,704,800
Y3	69,000	67,620	$ 25	$ 40	$1,690,500	$2,704,800
Y4	69,000	67,620	$ 30	$ 45	$2,028,600	$3,042,900
Y5	69,000	67,620	$ 30	$ 45	$2,028,600	$3,042,900
Y6	70,000	68,600	$ 35	$ 50	$2,401,000	$3,430,000
Y7	70,000	68,600	$ 35	$ 50	$2,401,000	$3,430,000
Y8	71,000	69,580	$ 40	$ 55	$2,783,200	$3,826,900
Total emission reductions:	**555,400**	**544,292**			**$ 16,028,880**	**$ 24,193,260**

Carbon Market Business Case Example

Costs

The costs for carbon credit development typically includes the registry costs, the project validation and verification costs, as well as other project management and data costs. In Alberta, the costs to register carbon projects are dictated by the Alberta Registry Service Fees schedule. Some costs are fixed fees that are charged to all projects, and others are tied to the number of carbon credits that are generated by the project. An example of project validation and verification costs as well as project management costs are provided below. Note that the costs are shown either as a fixed fee or on a per unit basis. The per unit (tonne) costs in the example below are linked to the total discounted emission reductions of 544,292 in the revenue table in the previous slide. The total costs with the fixed fee and per unit cost are estimated to be $4,374,415.

Reduce Electricity (by replacing high stage consistency w/ low stage consistency)	Total Annual t GHG Reductions (NON-LEVIED)	Total Annual t GHG Reductions (discount 2%) (due to LEVIES)	Assumed carbon price (low)	Assumed carbon price (high)	Annual Value of Reductions (low)	Annual Value of Reductions (hi)
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Total emission reductions:	555,400	544,292			$ 16,028,880	$ 24,193,260

Carbon Market Business Case Example

Return on Investment (ROI):

The ROI in the business case covers the direct costs of generating carbon credits and the sale of those credits. Thus, the ROI for the energy efficiency project can be calculated with the profit (net revenue) and the total cost. See the table below for the expected profits under both scenarios. Note that the revenues are significantly higher than the carbon credit generation costs and thus a positive return on investment can be expected. In this example, the profit is expected to range. ***It is important to note that this ROI does not take into account the costs to implement the practice change, and thus a negative or a positive profit could be possible if those costs are taken into account**. Since this is a generalized carbon offset project, the costs of practice changes are not estimated.

	Carbon Price (low)	Carbon Price (high)
Project Revenue:	$ 16,028,880	$ 24,193,260
Project Cost:	$ 4,374,415	$ 4,374,415
Total Profit:	**$ 11,654,465**	**$ 19,818,845**

Note: This omits the cost of the internal practice change to the firm.

Carbon Market Business Case Example

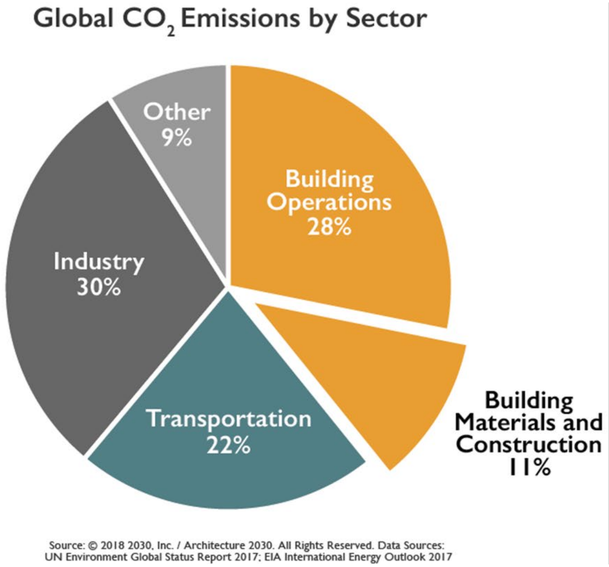
Below is a high-level business case summary of Canadian project examples in the Voluntary Carbon Market.

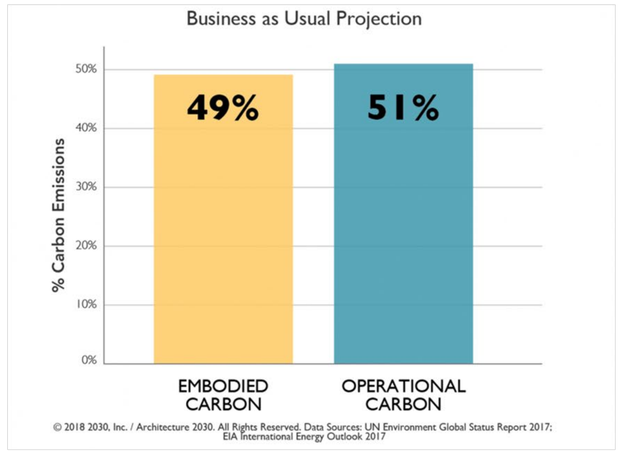
Jurisdiction	Project Type	Project Name	Project Proponent	Methodology	Crediting period	*Total Emission Reductions	Carbon Price	Revenue (USD)	Cost (USD)	Net Revenue
Forestry Projects										
Quebec	IFM	Carbon fixation project associated with LtPF conservation scenario of riparian strip enlargement	Cree First Nation of Waswanipi	VM0012	2016-2053	267,121	$ 4.89	$ 1,305,331	$ 224,533	$ 1,080,798
Quebec	IFM	Monet Forest Conservation	Solifor Bloc Monet S.E.C.	VM0010	2016-2036	33,633	$ 4.89	$ 164,353	$ 67,935	$ 96,418
Quebec	IFM/ ARR/REDD	Quebec Forestry Sector Carbon Sequestration Grouped Project Pivot	(Multiple)	VM0034	2018-2097	12,699,364	$ 4.89	$62,057,559	$6,558,616	$ 55,498,943
B.C.	IFM	Darkwoods Forest Carbon Project	Nature Conservancy	VM0012	2008-2108	806,897	$ 4.89	$ 3,943,037	$ 799,664	$ 3,143,373
Other Projects										
B.C.	Transport	Westport GHG Efficient Heavy-Duty Vehicles	Westport Innovations	AMS-III.C.	2009-2018	10,651,461	$ 1.11	$11,858,627	$1,603,723	$ 10,254,904
B.C.	Transport	Carbon Offset Aggregation Cooperative: Reducing GHG Emissions From Industrial Vehicle and Mobile Machinery (Grouped Project)	Carbon Offset Aggregation Co-operative BC	AMS III.BC	*project under development	435,418	$ 1.11	$ 484,765	$ 228,837	$ 255,929
Quebec	Energy industries (renewable/non-renewable sources)	Installation of a biomass-fired boiler at Arbec Forest Products G.P. in Peribonka	Arbec Forest Products G.P.	AMS-I.C.	2012-2021 *project not completed/ expired	98,869	$ 2.16	$ 213,227	$ 47,823	$ 165,405
Quebec	Energy industries (renewable/non-renewable sources)	Thermal Energy Substitution using Landfill Gas at Saint-Etienne-des-Gres	Les Serres du St-Laurent Inc	AMS-I.C.	2010-2020	70,462	$ 2.16	$ 151,963	$ 41,696	$ 110,267
Quebec	Waste Diversion	Energy Efficiency and Solid Waste Diversion Activities within the Quebec Sustainable Community	Will Solutions Inc	VM0018	2020-2029	22,852,000	$ 3.05	$69,622,427	$7,800,103	$ 61,822,324

II. Product Impact

Role of embodied carbon towards Net Zero construction

- To have a legitimate net zero carbon strategy, organizations need to include their embodied carbon emissions.
- Role of embodied carbon is increasingly more important as buildings become more energy efficient.
- Low carbon procurement policies are key to reduce emissions.
- Robust and third-party verified **Life Cycle Assessments (LCA)**, **Carbon footprints of Products (CFP)** or Environmental Product Declarations **(EPD)** must inform those policies regarding product differentiation.





Embodied carbon emissions will go from 28% to ~50% of total CO2 emissions in the construction sector by 2040 if current trends continue

Wood and mass timber products as low embodied products

- Manufacturing process is not energy-intensive and relies predominantly on electricity.
- Lower temperatures and feedstock processing emissions (e.g., from calcination) compared to concrete and steel products.
- Possible carbon sequestration credits for forest regrowth (sustainable managed forests) depending on protocol choice and assumed service life.
- More predictable construction times.
- *On a Whole Building Life Cycle (WbLCA) basis, cross-laminated timber (CLT) can reduce about 18% of C02e emissions per m2 of floor area, without considering forest regrowth credits or carbon sequestration in product* Liang, Shaobo, et al. "Comparative life-cycle assessment of a mass timber building and concrete alternative." *Wood and Fiber Science. 52 (2): 217-229.* 52.2 (2020): 217-229.*)*

Canada's sustainable procurement initiatives

- Greening government strategy: The government will reduce the environmental impact of structural construction materials by
  disclosing the amount of embodied carbon in the structural materials of major construction projects by 2022, based on material carbon intensity or a life-cycle analysis
  - reducing the *embodied carbon* of the structural materials of *major construction projects by 30%*, starting in 2025, using recycled and lower-carbon materials, material efficiency and performance-based design standards
  - conducting whole building (or asset) life-cycle assessments by 2025 at the latest for major buildings and infrastructure projects

- Low-carbon assets through life cycle assessment (LCA^2) initiative NRC, Construction Research Centre) will develop
  - infrastructure specific life cycle assessment (LCA) guidelines/tools
  - related procurement specifications
  - low-carbon benchmarks
  - a *Canadian life cycle inventory (LCI) database*

- Vancouver's Embodied Carbon Strategy
  - By 2030 the carbon embodied in new buildings is *40% of what it was in 2018*

Government of Canada / Gouvernement du Canada

Canada

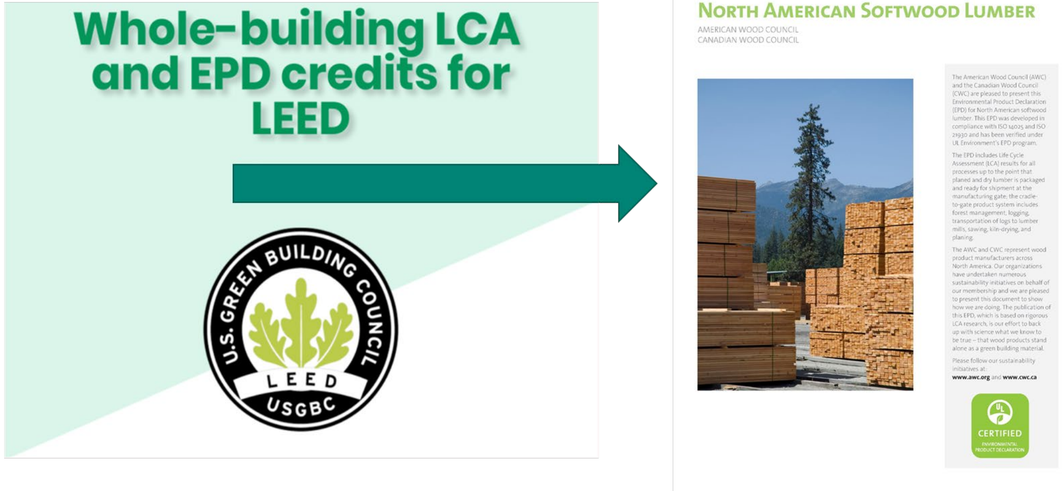
Canada NRC·CNRC

CIRAIG MC
Centre international de référence sur le cycle de vie des produits, procédés et services

CITY OF VANCOUVER

Sectorial and private initiatives

- Major market influencers (e.g., Amazon) are adopting building decarbonization strategies
  - Driver: e.g., LEED certification that awards credits *for Whole Building LCA* reductions
- Canada's Cement Industry and the Government partnered in 2021 to achieve net-zero carbon concrete.
  - Government support for EPD and LCA development (linked also to LCA^2 initiative)
- The American Wood Council and the Canadian Wood Council (CWC) have developed several industry wide EPDs, applicable to all the wood product manufacturers located across North America.
- CWC part of the Technical Committee reviewers for the NRC- National guidelines for whole-building life cycle assessment (WbLCA).



How can Radicle help

- Support the development of pre-verified tools for Carbon Footprint of Products or Whole Building Life Cycle assessment
- Support the establishment of Life Cycle Inventories (LCI) for Canadian Wood products or services
- Perform Whole Building LCA studies across the whole sector or for individual case studies, using the recently developed guidelines and other standards of protocols
- Support the development of product specific LCA/EPDs for CWC members
- Support the harmonization of LCA^2 life cycle assessment reporting with international best practices
- Serve as third-party critical reviewers (ISO 14044) for LCA studies of wood products or whole buildings using them

III. Communication & Education Impact

Integration of the Sustainability narrative to CWC's current initiatives

- Integrate the sustainability narrative into current communications outlets, plans and media.
- Partner with WoodWorks! To develop sustainability tools and programs to integrate in their current programs.
- Include sustainability as a core topic in the federal and provincial conferences.
- Find any other opportunity in the current plans to integrate the sustainability narrative.
- Assign a specific budget (through a grant? Or funding?) for developing the sustainability educational and advocacy elements that are needed for achieving the goal of net zero by 2030.

Communications & Education Framework

GOALS AND STRATEGIES

Goal - Fulfill CWC's mandate to expand market access and demand of Canadian wood

1. Position '**sustainability**' front and center as the core driver of the industry to the future

2. **Visualize the goal to Net-Zero 2030** and make it tangible and attainable to key audiences

3. **Facilitate the integration** of sustainability codes, standards and certifications among members

AUDIENCES AND TACTICS

1. Members
2. Potential members
3. Partners
4. Indigenous stakeholders
5. Government
6. NGO's
7. Public in General

Tactics

I. Sustainability Day
II. Innovation teams
III. Expert voices
IV. Education toolkit
V. Advocacy toolkit
VI. 'Roadmap to Net-Zero' Campaigns

MILESTONES TO 2030

Milestones to 2030

2022 - Preparation of framework tools, materials, etc.

2023 - Launch new sustainability positioning, vision and pledge

2023 – 2028 - Integration of sustainability certifications, codes, standards among members

2024- 2030 – Adhesion of members and potential members to the sustainability practices

2024- 2030 – Communication campaigns on advances in the sector towards pledge

KPIs

2023 - All members are aware and engaged with the CWC sustainability vision as measured in an annual member survey

2023 - 2030 – Members complete the sustainability certification

Additional KPIs TBD with CWC

I. Sustainability Day

During the Annual National Conference, assign one day with the only purpose of the application of knowledge and the development of practical strategies geared towards making wood industry practices more sustainable.

1. **National and Global Sustainability Experts:**
   Expert presentations on woods sustainability. Example topics: emission reduction processes and standards, measuring the industry footprint, certifications, and embodied carbon. Experts can be sourced from leading initiatives such as C40Cities, Canadian trailblazers, and European leaders.

2. **Presentation of the Sustainability Awards:**
   Recognize the progress of members on their path to net-zero, including partners sponsoring and evaluating the different categories, including a scholarship or grant to an NGO supporting a sustainable use of wood.

3. **Partnership Opportunities**:
   Leaders in online education about sustainability topics can be considered as key partners for the awards, such as the Ellen Macarthur Foundation or the University of Cambridge.

4. **Roundtable:**
   Roundtables to discuss sustainability in different angles (ala 'Ask an Expert') involving experts in carbon offsetting, embodied carbon, biophilia, building with sustainable materials, circular economy practices, etc.

AUDIENCES

1. Members
3. Partners
4. Indigenous stakeholders
5. Government
6. NGO's

II. Innovation Teams

Invite members to participate in innovation and change for a more sustainable practice:

1. **Sustainability Change Agents:**
   To move participants from ideas to actions, they are placed into Interdisciplinary Innovation Teams. Representatives from government/municipality, indigenous stakeholders, construction, architects, and designers are challenged to work together on sustainability solutions for the wood industry.

2. **Virtual Setting across National Scope:**
   The collaborative relationships continue year-round with ongoing support from the CWC. Teams are scheduled to meet virtually and in-person at Regional Wood Solutions conferences to continue to strengthen networks, collaborate across the sector, and integrate effective ways to deliver sustainability solutions to the wood sector.

3. **Advancement of Practice:**
   Groups meet and present their strategies each year of the National Symposia. The sustainability “change agents” emerge from the Symposia and return to their communities and organizations armed with new perspectives and strategies. Innovative findings can be awarded at the CWC Wood Design & Building Awards.

AUDIENCES

1. Members

3. Partners

4. Indigenous stakeholders

6. NGO’s

III. Expert Voices

Global and national experts in Wood's sustainability are interviewed in a Q & A blog format to share their ideas, research, projects, and insight about how to bring sustainability practices to the wood industry in Canada.

1. **Expert Interviews:**
   For each blog feature, experts are interviewed at the yearly Symposia. Leading projects will be featured with key learnings.

   Example topics include:
   Keeping Wood in Circulation
   The New Era of Wood Construction and Sustainability
   Source to End of Life
   Dismantling and Remanufacturing Wood
   Becoming Circular

2. **Convener of Wood Sustainability Knowledge:**
   Guest blogs bring global knowledge and expert learnings to the wood sector in a digital format by initially distributing the posts to social media channels (Twitter/LinkedIn) and establishing the sustainability conversation as a key pillar of communication online for the CWC.

3. **Text and Audio Formats:**
   Blogs are professional in tone, non-promotional, and hosted on the CWC Website as a learning opportunity. The format will include text blogs with a recorded Podcast link to account for user preferences (text/audio), link building, and Website visits/engagement.

4. **Recorded National and Provincial Conference Talks**
   Recorded Symposia talks can be hosted on the Wood Works! website as a Sustainability Resource library. Potential for future evolution of the resource can be considered as part of the certification.

AUDIENCES
1. Members
2. Potential members
3. Partners
4. Indigenous stakeholders
5. Public in General

IV. Education Toolkit

This practical resource from Wood Works! can help stakeholders develop, plan and deliver sustainability solutions. Drawing on research and practice, and coupled with working document and templates, the toolkits will outline how to ensure sustainability is an integral part of the building design, engineering, and construction for any Wood-related project.

1. **Online Toolkits**:
   Online sustainability will be toolkits hosted on the Wood Works! Website.

   An example of toolkit topics include:
   A Step by Step Approach for Specifying Mass Timber in Canada
   Tips for Navigating the Supply Chain when Building with Wood
   Woods Life-Cycle Analysis
   How to Measure, Monitor, and Report on GHG Emissions for Wood
   Understanding and Implementing Sustainable Wood Building Projects within the current Code Regulations
   Carbon Offsets for Wood - 101
   Wood as a Hybrid Structure
   How to Represent Embodied Carbon in the Build Environment

2. **Webinars**:
   Webinars provides an overview of the Toolkits and highlight learnings from projects/organizations who have implemented them.

3. **Actioning Workshops:**
   Actioning Workshops allow for training to implement Toolkits. These training sessions can be held by Wood Works! and occur either in-person or virtually for key stakeholders.

4. **Self-Paced Learning Modules:**
   Course content can include Symposia Webinar Archives followed by self-paced learning modules and exercises.

AUDIENCES

1. Members
2. Potential Members
3. Indigenous stakeholders
4. NGOs
4. Public in General

V. Advocacy Toolkit

Sustainability **whitepapers, videos and infographics** give an in-depth overview of the sustainability features of wood in a variety of different topic areas. They also serve to celebrate the points of differentiation which make the sustainable Canadian wood sector unique - for example: certified forestry bodies, sophisticated sawmill technologies, rich sector history/expertise, and innovation in mass timber.

1. **Dispel Myths through Third Party Expertise**:
   Whitepapers allow for a variety of technical and academic sources to be referenced allowing readers to learn more about the topics of interest. For example, to dispel myths surrounded the contentious discussion about the impact of the timber industry on Canadian forests, sources from Royal Architectural Institute of Canada could be included around the work being done on Sustainability and Canadian Forests.

2. **Topical Content Calendars**:
   Whitepaper content can allow for varied content.
   An example of a Whitepaper calendar for Wood and Sustainability includes:
   Canadian Forestry Practices in Sustainability
   Wood Products and Carbon Sequestration
   Wood Biodiversity
   Myths and Truths about Wood and Fire Safety
   Biofilia in Wood Construction
   Cradle to Cradle - The Circular Lifecycle of Wood
   How Canadian Wood can Remain Competitive in our Current Economy

3. **Tell the Story of Wood's Sustainability:**
   To better tell the story of wood and sustainability, Whitepapers can be shared on B2B digital platforms using an infographic format (CWC Website, social media), and available digitally at key business events using a QR code format. This allows for wide reach of different target audiences and stakeholders.

AUDIENCES
1. Members
3. Indigenous stakeholders
4. NGOs
5. Partners
4. Public in General

VI. Roadmap to 2030 Campaign

Develop a multi-media campaign to communicate the new vision of CWC with respect to sustainability, invite members to join CWC and position Canadian sustainable wood globally and nationally.

The campaign will serve as the expression of the renewed CWC, its pledge towards 2030 and the springboard for members to market their products and processes in a broad scope.

AUDIENCES

1. Members
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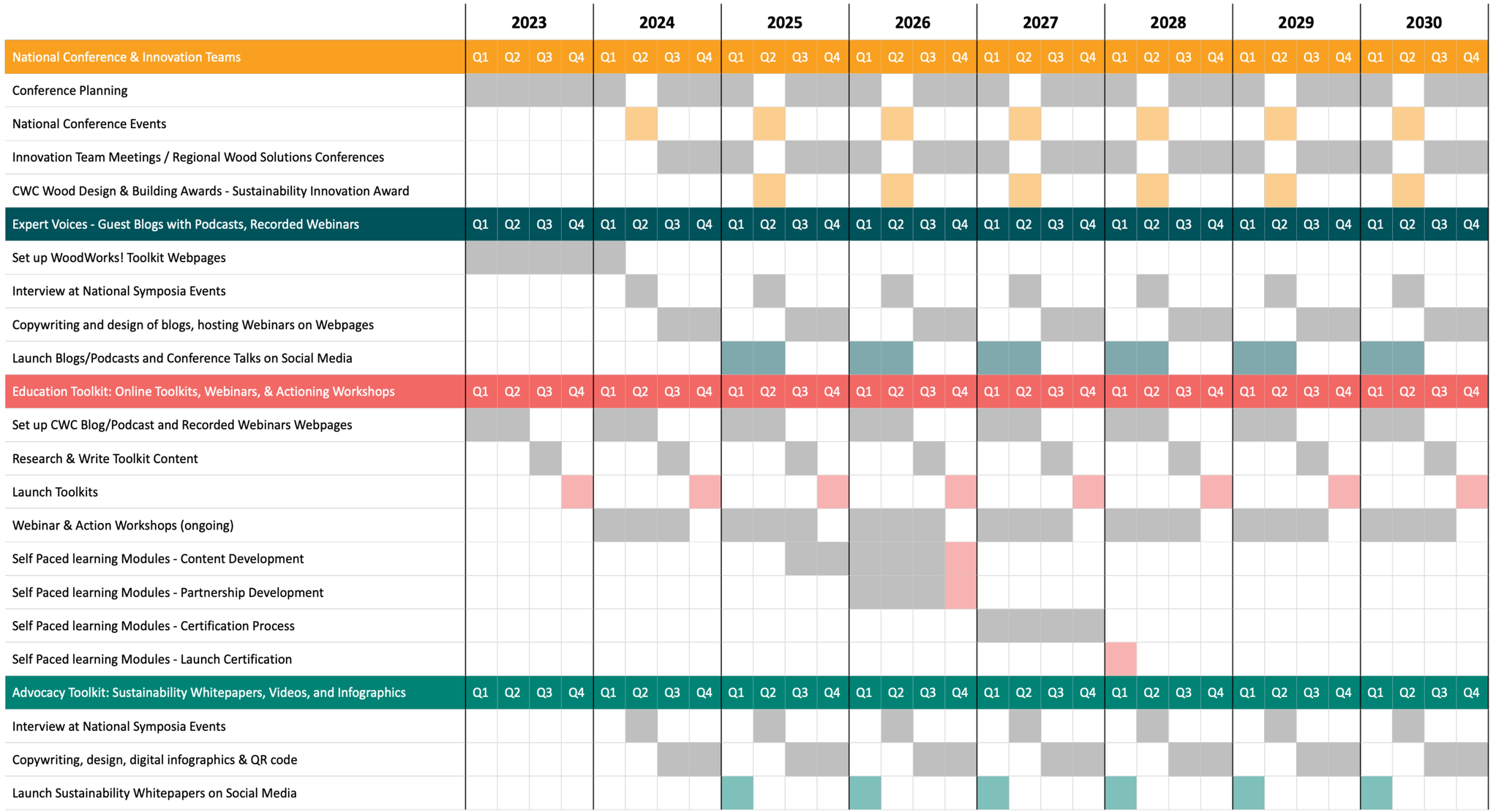
CWC Strategic Marketing & Education Implementation Plan



Conclusions and Recommendations

- Prioritize the review and approval by the BOD of the presented vision, mission and purpose.
- Assign an internal team to co-develop and execute the strategy.
- Develop and design a special budget that includes support and funding by province and nationwide.
- Develop a RACI (Responsible, Accountable, Consulted, Informed) framework to accelerate the implementation.
- Develop KPIs across the team so everyone at the CWC stays engaged with the progress of the plan.
- Assist members to measure, and reduce their organizational GHG emissions

Implement a consistent data management system to enable CWC to measure, reduce, and report on its emissions publicly for its members' businesses.

Aggregate and report on the emissions for the whole wood sector, and use this information to also lobby on behalf of the wood sector.

Estimate and certify the embodied carbon in CWC membership business products through LCA/EPDs, or communicate the comparative sustainability advantages of those products in a whole building life cycle basis, which contributes to the achievement of the Canadian Net Zero targets by 2050.

By focusing on the business case for carbon reductions, CWC members will reduce climate risk, improve operational efficiencies, increase employee engagement, and gain quantifiable data, all of which adds up to an increased competitive advantage.

Thank you.

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